

# Work Order ID 138740

**\*138740\***

Page 1

Wednesday, November 11, 2015 7:18:58 AM

Item ID: D412-742-043 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Repl. Skidtube Fits LH or RH, High Gear, DART (Apical) Tri-Bag Float Comp.  
 Start Date: 11/11/2015 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 11/11/2015 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: MLJ Date: NOV 11 2015 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
| D3391    | I            |

|     |                  |      |  |  |  |  |  |  |  |
|-----|------------------|------|--|--|--|--|--|--|--|
| 100 | Document Control | 0.00 |  |  |  |  |  |  |  |
|-----|------------------|------|--|--|--|--|--|--|--|

**\*100\***

DC

Doc.Control -USB or Paperwork

Memo

0.00

If D412-742-043 is a W/O on it's own,  
 Photocopy bluefile and create labels per PPP D412-742-043 CHG005

*16 per ECN  
 16-904  
 MF 16-1-13*

*MLJ*

**MAR 01 2016**

**B138740**

**Work Order ID 138740**

Wednesday, November 11, 2015 7:18:58 AM

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Page 2

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Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 110                            | HandFinishing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.00                 |         |        |              |               |               |                  |                |
| <b>*110*</b>                   | HandFinish                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.03                 |         |        |              |               |               |                  |                |
| Hand Finishing                 | <p><b>Memo</b></p> <p>1-Install tubes together and seal them all the way around using Sikaflex 241/291. Ensure tube ends line-up with saddle holes for proper alignment. using 7/16" "T" Pins.<br/>A/RSikaflex-241/-291 <u>M1133862</u><br/>Expiry date: <u>16/12</u></p> <p>2-Install wearplates as per Dwg D3391. Ensure that plastic washers are against wearplate, then topped with the SS washer. Seal all bolts with sikaflex except ones with inserts on inside of tube ,hand tighten only bolts with no sikaflex.</p> <p>A/RSikaflex-241/-291 <u>M1133862</u><br/>Expiry date: <u>16/12</u></p> <p>3-Remove "T" pins once sikaflex is dry.</p> <p>4-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser.<br/>A/RLPS Procyon <u>M1122500</u></p> |                      |         |        |              |               |               |                  |                |

*Handwritten notes and stamps:*  
1 x f JH 16/02/10

**Work Order ID 138740**

Wednesday, November 11, 2015 7:18:58 AM

**\*138740\***

Page 3

Item ID: D412-742-043 Accept **\*N900040100\*** Setup Start **\*NS1\***  
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Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID                | Operation<br>Description                                                                                                   | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp                   |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------------------------|
| 120<br><b>*120*</b><br>QC<br>Quality Control  | QC5- Inspect part completeness to step on W/O<br><br>Memo                                                                  | 0.00<br><br>0.00     |         |        |              | 1             |               |                  | DAS<br>38<br>9-89<br>FEB 16 2016 |
| 130<br><b>*130*</b><br>Packaging<br>Packaging | Packaging<br><br>Memo<br>Identify and pack for shipping as per PPP D412-742-043<br>Location: <u>6673</u><br>PPP Rev: _____ | 0.00<br><br>0.00     |         |        |              | 1x            | 17.10         | SNP              | P.T.O.                           |
| 140<br><b>*140*</b><br>QC<br>Quality Control  | QC21- Final Inspection - Work Order Release<br><br>Memo                                                                    | 0.00<br><br>0.00     |         |        |              | ML5           |               |                  | MAR 01 2016                      |

ML5 MAR 01 2016

DQA:

Date: 16-04-14



QA Closed:

Date: 16/03/02

## WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                 |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------|--|
| Work Order: 138740<br>Part No. D412742-043<br>NCR No. 16-5639                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <b>DISPOSITION</b><br>Rework <input checked="" type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |  | <b>AGAINST DEPARTMENT/PROCESS</b><br>Skid-tube <input type="checkbox"/> Cross tube <input type="checkbox"/> Water Jet <input type="checkbox"/> Engineering <input type="checkbox"/><br>Machining <input type="checkbox"/> Small Fab <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Quality <input type="checkbox"/><br>Thermoforming <input type="checkbox"/> Finishing <input checked="" type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Other <input type="checkbox"/><br>Large Fab <input type="checkbox"/> Composite <input type="checkbox"/> Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                 |  |
| Date: 16-02-25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | Step #: 130                                                                                                                                                                               |  | QTY Effective: 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | MRB (Q51042) Approval<br>DAS 9<br>9-89 16-02-25 |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                           |  | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                 |  |
| Found during packaging that AFT cap was damage<br><br>R.C. No proper holding area for tube waiting to be package                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                           |  | Remove and scrap<br>- D2646 B 132326 x 2<br>- AN3C4A M 134057 x 4<br><br>Re install cap as per diag.<br>- D2646 B 136885 x 2<br>- AN3C4A M M 134057 x 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                 |  |
| <b>Root Cause</b><br>Environment <input type="checkbox"/> No Re-verification <input type="checkbox"/><br>Design <input type="checkbox"/> Operator <input type="checkbox"/><br>Doc/Data <input type="checkbox"/> Offset/Setup <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/> Supplier <input type="checkbox"/><br>Handling/Pre <input checked="" type="checkbox"/> Training <input type="checkbox"/><br>Material <input type="checkbox"/> Use for Testing <input type="checkbox"/><br>Internal Transport <input type="checkbox"/> Poor Information <input type="checkbox"/><br>Tribal Knowledge <input type="checkbox"/> Rushing <input type="checkbox"/><br>LOA <input type="checkbox"/> Product Improvement <input type="checkbox"/><br>Substation <input type="checkbox"/> Process Improvement <input type="checkbox"/><br>Past Expiry Date <input type="checkbox"/> Manufacturing Process <input type="checkbox"/><br>Misidentified <input type="checkbox"/> Past Due <input type="checkbox"/> |  |                                                                                                                                                                                           |  | <b>FAULT CATEGORY</b><br>Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Positioned Wrong <input type="checkbox"/><br>Bending <input type="checkbox"/> Set-up <input type="checkbox"/> Folio/Program <input type="checkbox"/> Outside Dimensions <input type="checkbox"/><br>Centre Not Concentric <input type="checkbox"/> BOM/Route <input type="checkbox"/> Grain <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/><br>Cracks <input type="checkbox"/> Broken/Damage/Defect <input checked="" type="checkbox"/> Weld <input type="checkbox"/> Part Incorrect <input type="checkbox"/><br>Crimp/Kink/Ripple/Wave <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/><br>Cuffs <input type="checkbox"/> Contamination <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Part Moved <input type="checkbox"/><br>Crushing <input type="checkbox"/> Countersink <input type="checkbox"/> Off-set <input type="checkbox"/> Drawing <input type="checkbox"/><br>Heat Treat <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Misabeled <input type="checkbox"/> Finish <input type="checkbox"/><br>Wave/Twist in Tube <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Fit/Function <input type="checkbox"/> Misread <input type="checkbox"/><br>Marks/Chatter <input type="checkbox"/> Drill Holes <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Turning Sequence <input type="checkbox"/> |  |                                                 |  |
| OTHER: <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                 |  |

# Picklist Print

Wednesday, November 11, 2015 7:19:02 AM

Page 1

Work Order ID: 138740

**\*138740\***

Parent Item: D412-742-043

**\*D412-742-043\***

Parent Item Name: Repl. Skidtube Fits LH or RH, High Gear, DART (Apical) Tri-Bag Float Comp.

Start Date: 11/11/2015

Required Date: 11/11/2015

Start Qty: 1.00

Required Qty: 1.00

**Comments:**

IPP Rev A 05.10.13 New Issue KJ/JLM  
 IPP Rev 06.02.13 ECN 773 dwg @ rev.D EC  
 IPP Rev:C 07-05-28 As per Rev F JLM  
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM  
 IPP Rev:E 08-09-08 ecn 08-510 DD verified by:EC IPP Rev:F  
 11.11.01 as per DSI9517 REV.B DD verified by:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D3391-021                       |                        | Manufactured  | No          |                     |                  |                 | Each               | 0.0000         |             | 1            |               |                |        |
| <b>*D3391-021*</b>              |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   |              |               |                |        |
| Fwd Tube Assembly               |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |
| D3391-023                       |                        | Manufactured  | No          |                     |                  | 110             | Each               | 0.0000         | 1           | 1            |               |                |        |
| <b>*D3391-023*</b>              |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   |              |               |                |        |
| Mid Tube Assembly               |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |
| D3391-025                       |                        | Manufactured  | No          |                     |                  | 110             | Each               | 1.0000         | 1           | 1            |               |                |        |
| <b>*D3391-025*</b>              |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   |              |               |                |        |
| Aft Tube Assembly               |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |

B138729 (12) JLM 14/02/09  
 B138732 (12) JLM 16/02/09  
 B138735 (12) JLM 16/02/10

Location

Loc Qty

Loc Code

FG

1

112712

1

# Picklist Print

Wednesday, November 11, 2015 7:19:02 AM

Page 2

Work Order ID: 138740

**\*138740\***

Parent Item: D412-742-043

**\*D412-742-043\***

Parent Item Name: Repl. Skidtube Fits LH or RH, High Gear, DART (Apical) Tri-Bag Float Comp.

Start Date: 11/11/2015

Required Date: 11/11/2015

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No 110 Each 777.0000 24 24

**\*AN3C4A\***

Bolt

**\*\***

*ll 11/02/09*

| Location | Loc Qty | Loc Code |     |
|----------|---------|----------|-----|
| FG       | 20      | M134055  | x74 |
| 122814   | 20      |          |     |
| FP001    | 377     |          |     |
| M131420  | 12      |          |     |
| M132317  | 76      |          |     |
| M132551  | 61      |          |     |
| M132803  | 50      |          |     |
| M133440  | 178     |          |     |
| ST349    | 12      |          |     |
| M133234  | 12      |          |     |
| ST350    | 368     |          |     |
| M133440  | 368     |          |     |

AN3C6A Purchased No 110 Each 139.0000 10 10

**\*AN3C6A\***

Bolt

**\*\***

*ll 11/02/09*

| Location | Loc Qty | Loc Code |     |
|----------|---------|----------|-----|
| CA       | 39      | M133990  | x10 |
| m128704  | 39      |          |     |
| FG       | 10      |          |     |
| 122416   | 10      |          |     |
| ST249    | 50      |          |     |
| m133363  | 50      |          |     |
| ST338a   | 36      |          |     |
| m128769  | 30      |          |     |
| m133077  | 6       |          |     |
| ST349    | 4       |          |     |
| m132767  | 4       |          |     |

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Shop Packet Print

Page 2

# Picklist Print

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Page 3

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**\*D412-742-043\***

Parent Item Name: Repl. Skidtube Fits LH or RH, High Gear, DART (Apical) Tri-Bag Float Comp.

Start Date: 11/11/2015

Required Date: 11/11/2015

Start Qty: 1.00

Required Qty: 1.00

AN3C7A

Purchased

No

110

Each

607.0000

4

4

**\*AN3C7A\***

Bolt

\*\*

11 16/02/09

Location

Loc Qty

Loc Code

FG

10

122141

10

FP001

84

m125709

84

X 4

ST349

513

m125709

513

NAS1149C0332R

Purchased

No

110

Each

4,114.000

38

38

**\*NAS1149C0332R\***

WASHER

\*\*

11 16/02/09

Location

Loc Qty

Loc Code

FP001

1004

m132930

1004

1134073

X 38

FP01

581

m133284

581

GA

435

m133284

435

ST271

2094

m133284

2094

D4095-041

Manufactured

No

110

Each

2.0000

1

1

**\*D4095-041\***

Wearplate Fwd

\*\*

11 16/02/09

Location

Loc Qty

Loc Code

FP002

2

136547

2

B139765

X 1

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Shop Packet Print

Page 3

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Page 4

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Start Date: 11/11/2015

Required Date: 11/11/2015

Start Qty: 1.00

Required Qty: 1.00

D4095-043

Manufactured No

110

Each

1.0000

1

1

**\*D4095-043\***

Wearplate Aft

**\*\***

B140674 (1x) J1 16/62/09

Location

Loc Qty

Loc Code

FP002

1

134429

1

D4095-045

Manufactured No

110

Each

2.0000

1

1

**\*D4095-045\***

Wearplate Center

**\*\***

B140675 (1x) J1 16/62/09

Location

Loc Qty

Loc Code

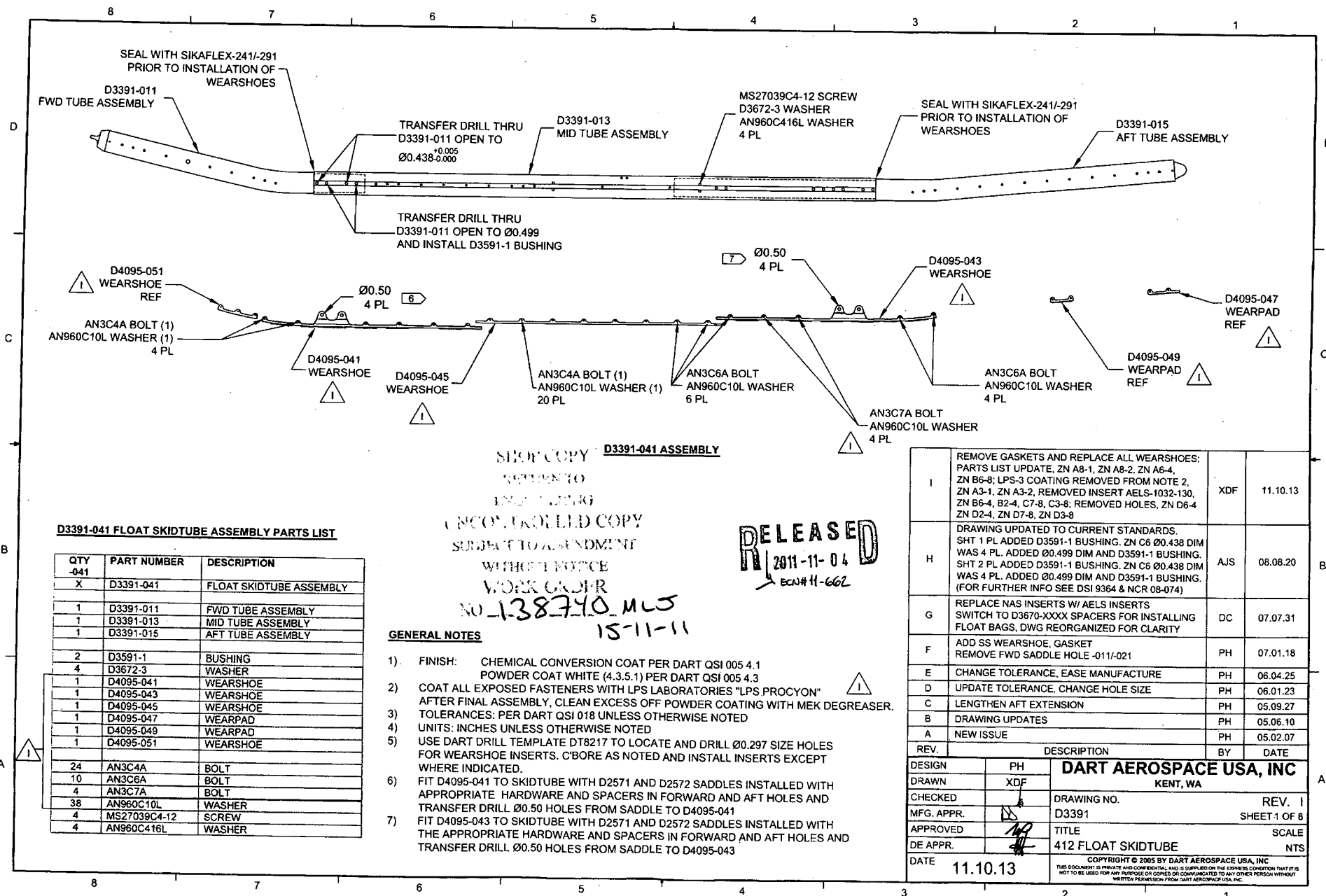
FP002

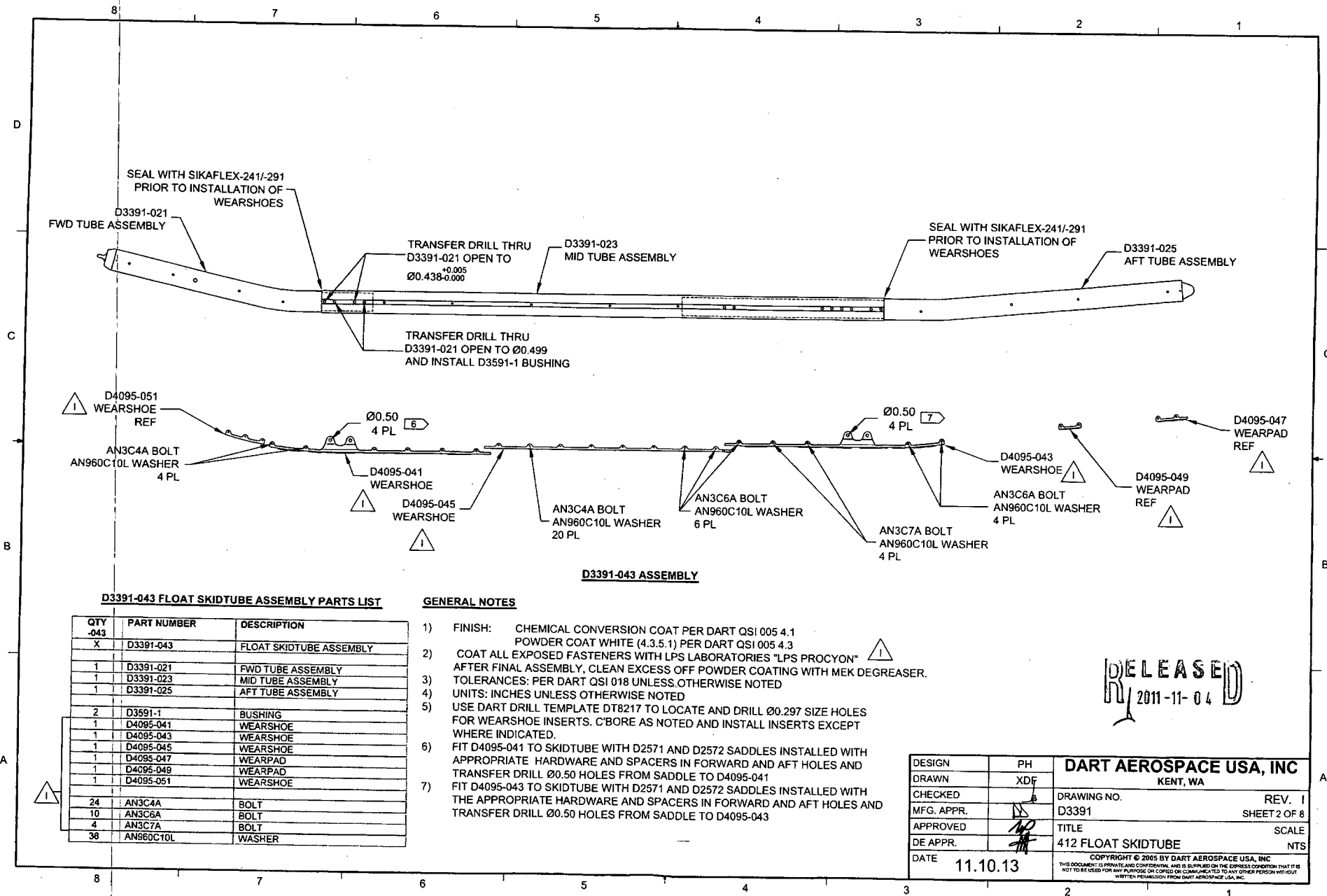
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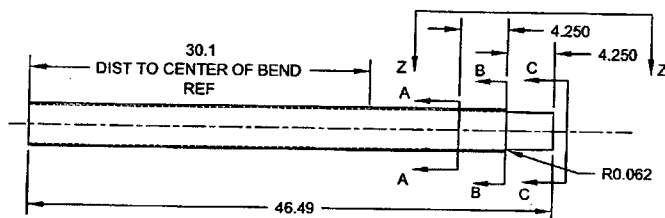
136460

2

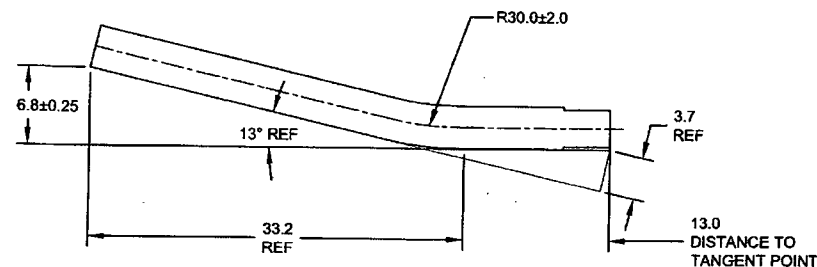




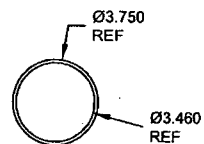




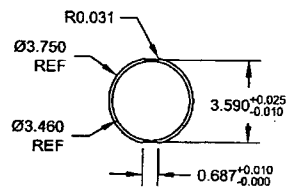
**D3391-1 CUTTING DETAIL**  
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



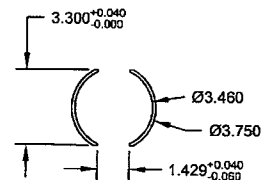
**D3391-011/-021 BENDING DETAIL**  
(MAKE FROM D3391-1)



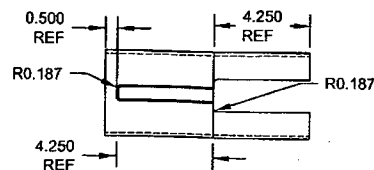
**SECTION A-A**  
SCALE 2X



**SECTION B-B**  
SCALE 2X



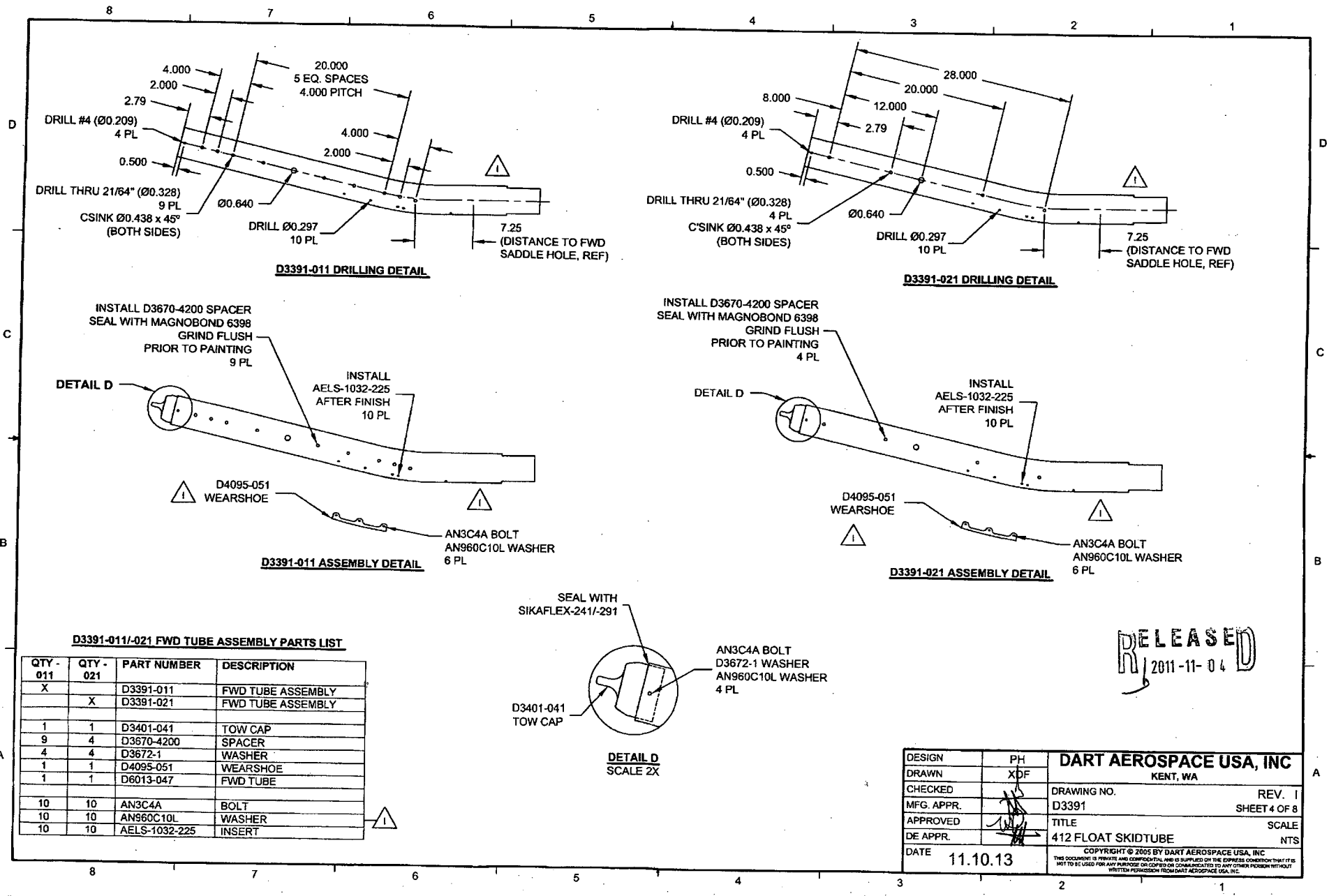
**SECTION C-C**  
SCALE 2X



**VIEW Z-Z**  
SCALE 2X

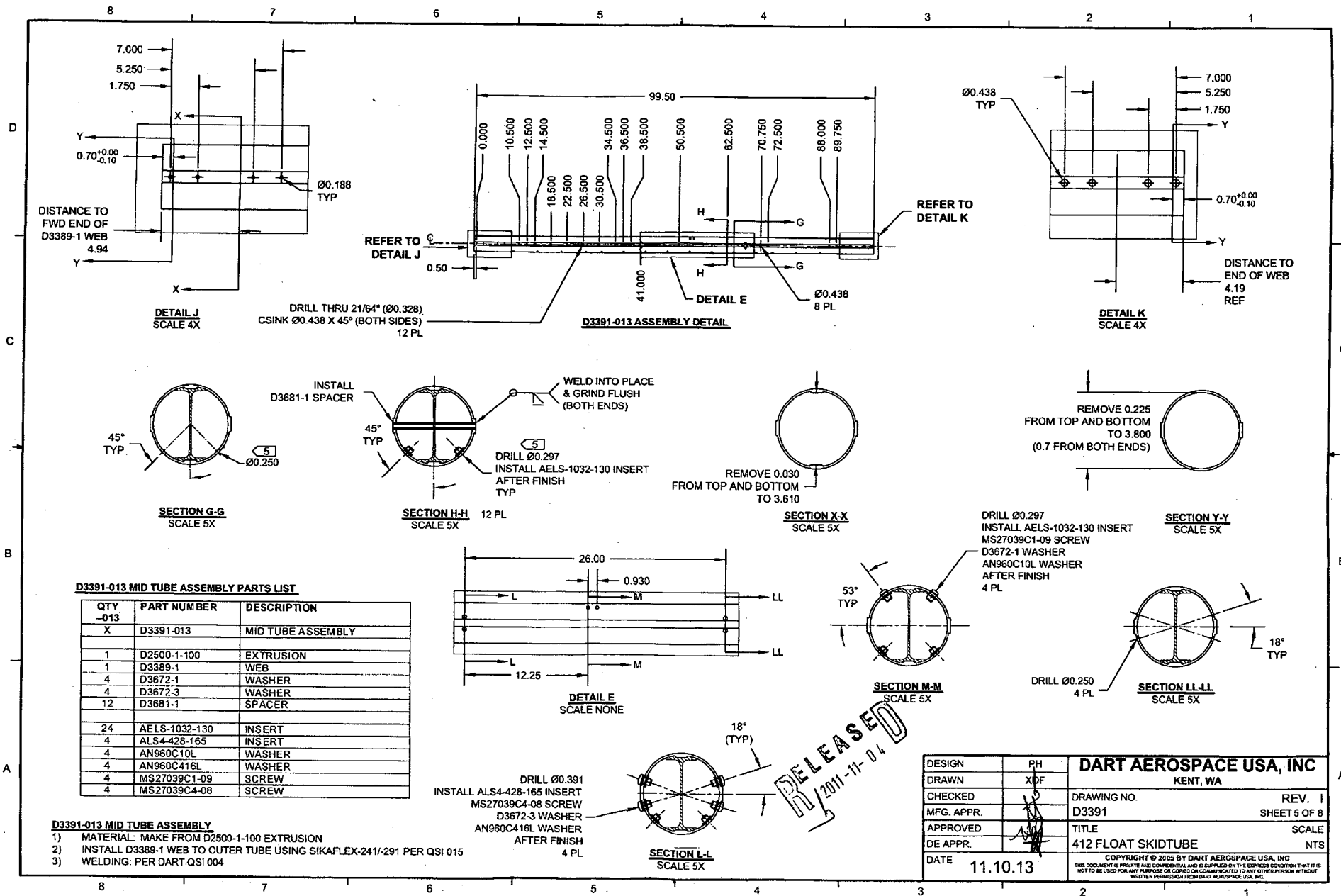
**RELEASED**  
2011-11-04

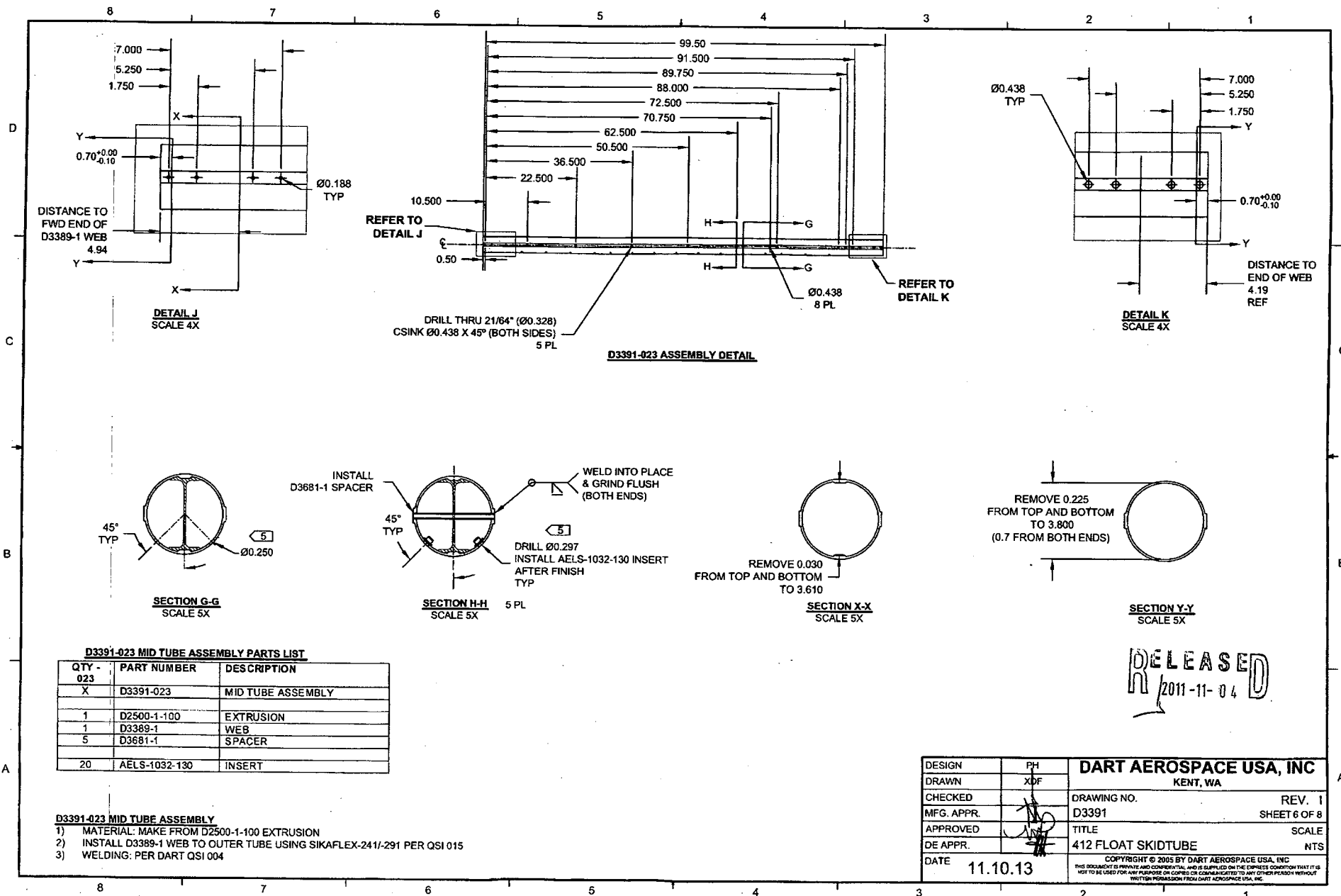
|            |          |                                                                                                                                                                                                                                                                                                      |        |
|------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| DESIGN     | PH       | <b>DART AEROSPACE USA, INC</b>                                                                                                                                                                                                                                                                       |        |
| DRAWN      | XDF      | KENT, WA                                                                                                                                                                                                                                                                                             |        |
| CHECKED    |          | DRAWING NO. D3391                                                                                                                                                                                                                                                                                    | REV. 1 |
| MFG. APPR. |          | SHEET 3 OF 8                                                                                                                                                                                                                                                                                         |        |
| APPROVED   |          | TITLE                                                                                                                                                                                                                                                                                                | SCALE  |
| DE APPR.   |          | 412 FLOAT SKIDTUBE                                                                                                                                                                                                                                                                                   | NTS    |
| DATE       | 11.10.13 | <small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES, BE COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small> |        |



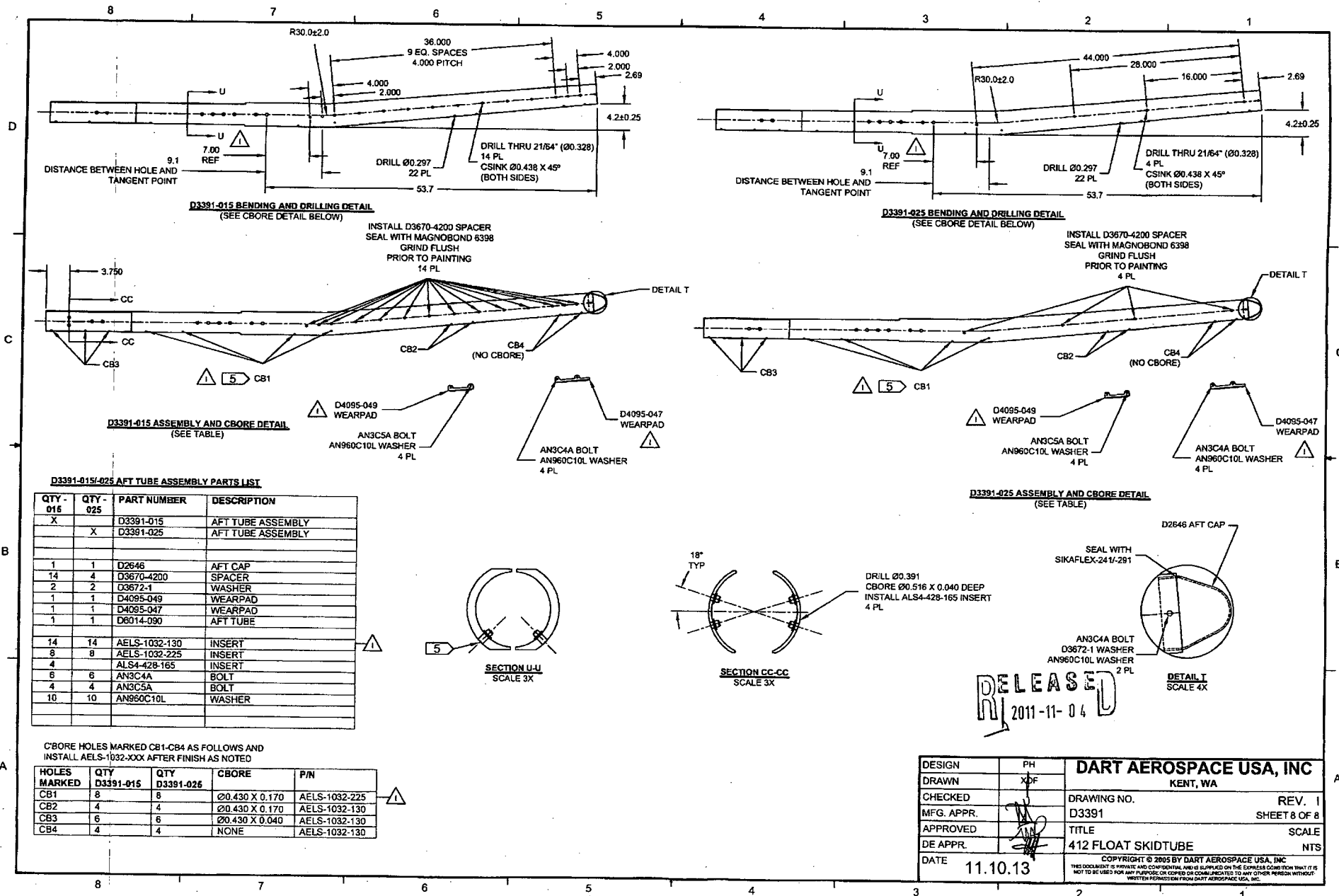
RELEASED  
2011-11-04

|                                                                                                                                                                          |          |                                             |              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------|--------------|
| DESIGN                                                                                                                                                                   | PH       | DART AEROSPACE USA, INC                     |              |
| DRAWN                                                                                                                                                                    | XDF      | KENT, WA                                    |              |
| CHECKED                                                                                                                                                                  |          | DRAWING NO.                                 | REV. I       |
| MFG. APPR.                                                                                                                                                               |          | D3391                                       | SHEET 4 OF 8 |
| APPROVED                                                                                                                                                                 |          | TITLE                                       | SCALE        |
| DE APPR.                                                                                                                                                                 |          | 412 FLOAT SKIDTUBE                          | NTS          |
| DATE                                                                                                                                                                     | 11.10.13 | COPYRIGHT © 2005 BY DART AEROSPACE USA, INC |              |
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DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                     | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                        | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube <input type="checkbox"/></td> <td style="width: 15%;">Cross tube <input type="checkbox"/></td> <td style="width: 15%;">Water Jet <input type="checkbox"/></td> <td style="width: 15%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |                                   |                                             |                                           |                                              |                                     | Skid-tube <input type="checkbox"/>        | Cross tube <input type="checkbox"/>    | Water Jet <input type="checkbox"/>          | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/>    | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/>         | Thermoforming <input type="checkbox"/>    | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>               | Large Fab <input type="checkbox"/>             | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/>        |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
| Skid-tube <input type="checkbox"/>                           | Cross tube <input type="checkbox"/> | Water Jet <input type="checkbox"/>                                                                                                                                                 | Engineering <input type="checkbox"/>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                             |                                           |                                              |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    |                                          |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                         | Quality <input type="checkbox"/>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                             |                                           |                                              |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    |                                          |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>  | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                       | Other <input type="checkbox"/>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                             |                                           |                                              |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    |                                          |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>  | Supplier <input type="checkbox"/>                                                                                                                                                  |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                             |                                           |                                              |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    |                                          |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
| Date :                                                       |                                     | Step #:                                                                                                                                                                            |                                        | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                             | MRB (QSI042) Approval                     |                                              |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    |                                          |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
| Description Work Order Deviation                             |                                     |                                                                                                                                                                                    |                                        | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                   |                                             |                                           | Completed By                                 |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    |                                          |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
|                                                              |                                     |                                                                                                                                                                                    |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                             |                                           | Lead hand / Supervisor Approval Verification |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    |                                          |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
|                                                              |                                     |                                                                                                                                                                                    |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                             |                                           | QC / QA Coordinator Approval                 |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    |                                          |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
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| Root Cause                                                   |                                     | FAULT CATEGORY                                                                                                                                                                     |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                             |                                           |                                              |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    |                                          |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |
| Environment <input type="checkbox"/>                         | Design <input type="checkbox"/>     | Doc/Data <input type="checkbox"/>                                                                                                                                                  | Equip/Tooling <input type="checkbox"/> | Handling/Pre <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Material <input type="checkbox"/> | Internal Transport <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/> | LOA <input type="checkbox"/>                 | Substation <input type="checkbox"/> | Past Expiry Date <input type="checkbox"/> | Misidentified <input type="checkbox"/> | No Re-verification <input type="checkbox"/> | Operator <input type="checkbox"/>    | Offset/Setup <input type="checkbox"/> | Supplier <input type="checkbox"/>  | Training <input type="checkbox"/>          | Use for Testing <input type="checkbox"/> | Poor Information <input type="checkbox"/> | Rushing <input type="checkbox"/>   | Product Improvement <input type="checkbox"/> | Process Improvement <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> | Past Due <input type="checkbox"/>  | Pressure/Forced <input type="checkbox"/> | Bending <input type="checkbox"/> | Centre Not Concentric <input type="checkbox"/> | Cracks <input type="checkbox"/> | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Cuffs <input type="checkbox"/> | Crushing <input type="checkbox"/> | Heat Treat <input type="checkbox"/> | Wave/Twist in Tube <input type="checkbox"/> | Marks/Chatter <input type="checkbox"/> | Temperature/Cure <input type="checkbox"/> | Set-up <input type="checkbox"/> | BOM/Route <input type="checkbox"/> | Broken/Damage/Defect <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Contamination <input type="checkbox"/> | Countersink <input type="checkbox"/> | Cut Too Short <input type="checkbox"/> | Instructions Incomplete/Unclear <input type="checkbox"/> | Drill Holes <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/> | Folio/Program <input type="checkbox"/> | Grain <input type="checkbox"/> | Weld <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/> | Out of Sequence <input type="checkbox"/> | Off-set <input type="checkbox"/> | Mislabeled <input type="checkbox"/> | Fit/Function <input type="checkbox"/> | Misaligned/off center <input type="checkbox"/> | Positioned Wrong <input type="checkbox"/> | Outside Dimensions <input type="checkbox"/> | Over/Under tolerance <input type="checkbox"/> | Part Incorrect <input type="checkbox"/> | Part Lost/Missing <input type="checkbox"/> | Part Moved <input type="checkbox"/> | Drawing <input type="checkbox"/> | Finish <input type="checkbox"/> | Misread <input type="checkbox"/> | Turning Sequence <input type="checkbox"/> |
|                                                              |                                     |                                                                                                                                                                                    |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                             |                                           |                                              |                                     |                                           |                                        |                                             |                                      |                                       |                                    |                                            |                                          |                                           |                                    |                                              |                                              |                                                |                                    | OTHER :                                  |                                  |                                                |                                 |                                                 |                                |                                   |                                     |                                             |                                        |                                           |                                 |                                    |                                               |                                                            |                                        |                                      |                                        |                                                          |                                      |                                           |                                        |                                |                               |                                             |                                          |                                  |                                     |                                       |                                                |                                           |                                             |                                               |                                         |                                            |                                     |                                  |                                 |                                  |                                           |